

D. AMENDMENTS TO THE DRAWINGS

Please amend the drawings by adding the enclosed new Figures 7, 8, 9, 10, 11, and 12.

E. REMARKS**1. Amendments to the Specification**

- (a) Paragraphs [0014], [0015], and [0017]-[0021] as originally filed have been replaced by replacement paragraphs [0014], [0015], and [0017]-[0021] to provide consistency with Claim 1 as presently amended.
- (b) New paragraphs [0037a], [0037b], [0037c], [0037d], [0037e], and [0037f] have been added to the "Brief Description of the Drawings" to provide brief descriptions of new Figures 7, 8, 9, 10, 11, and 12 which are being introduced by the present amendment.
- (c) In paragraph 2 of the Office Action, the Examiner rejected Claims 6-8 under 35 U.S.C. 112, first paragraph, as being drawn to embodiments not fully enabled by the specification, on the basis that there was not a sufficient disclosure of structure with respect to how the bridging members of the embodiments in question can be hinged or swiveled to the ratchet wheels. This rejection was discussed in the March 1, 2005 telephone interview, during which the Examiner indicated that the rejection could be overcome by filing additional drawings disclosing structure corresponding to the embodiments of Claims 6-8 as described in paragraph [0044] of the specification as originally filed.

New Figures 7-12 are being filed in this amendment to address the foregoing rejection. New paragraphs [0044a], [0044b], [0044c], and [0044d] have been added to the specification to describe these newly-added Figures. It may be seen that new paragraphs [0044a], [0044b], [0044c], and [0044d], taken as a whole, essentially amount to an edited and expanded version of deleted original paragraph [0044], but broken down into shorter paragraphs to enhance readability.

2. Amendments to the Claims

(a) In paragraph 4 of the Office Action, the Examiner rejected Claim 1 under 35 U.S.C. 112, second paragraph, on the basis that there was no antecedent basis for various terms used in Claim 1 (and indicated below in *italics* for reference). Claim 1 is presently amended to address this particularly rejection, as follows:

- the preamble now recites a shaft, thus providing an antecedent for *the shaft*;
- the amended preamble specifically refers to the shaft as a round shaft, thus providing an implicit antecedent for *the shaft diameter*;
- the centroidal opening is now defined as having a semi-circular portion, thus providing an implicit antecedent for the reference to “the diameter of the semi-circular portion of the centroidal opening”, which phrase is now used instead of the original reference to *the diameter of the centroidal opening*;
- the word “minimum” has been deleted as being extraneous in reference to the width of the radial slot, thus eliminating the need for an antecedent for *the minimum width of the radial slot*;
- sub-paragraph a.2 has been amended to provide an antecedent for *the edges of the perimeter gap*;
- the reference to *the diameter of the primary ratchet wheel* has been deleted from paragraph (b) as being extraneous, thus eliminating the need for a corresponding antecedent; and
- the reference to *the arcuate length of the perimeter gap* has been deleted from paragraph (b) as being extraneous, thus eliminating the need for a corresponding antecedent.

(b) In paragraph 4 of the Office Action, the Examiner also rejected Claim 1 under 35 U.S.C. 112, second paragraph, on the basis that the references (in sub-paragraphs b.1 and b.2) to *the bridging member* and *the primary ratchet wheel* are ambiguous in view of the fact that a pair of each of these elements are previously recited. This issue has been addressed by amending sub-paragraphs b.1 and b.2 to add the

word “corresponding” before each recitation of the term “primary ratchet wheel” in these sub-paragraphs. This removes any ambiguity, since paragraph (b) already indicates that each bridging member is associated with “a corresponding one of the primary ratchet wheels”, and sub-paragraphs b.1 and b.2 are already written with reference to an individual one of the bridging members (i.e., “each bridging member”).

- (c) Paragraph (c) of Claim 1 has been amended to change the word “member” to “members” – thus avoiding any related ambiguity in view of the fact that a pair of bridging members have been previously recited.
- (d) As originally filed, paragraph (c) of Claim 1 recited “locking means, for locking the bridging [members] in the open position”, but it is readily apparent that this was an inadvertent drafting error. The specification makes it clear (at paragraph [0043]) that although means for holding the bridging member in the locking position may be provided, it is not essential to the invention. What is important (as suggested in paragraph [0041]) is to have means for releasably locking each bridging member in the engaged position, to prevent relative displacement between the cogs of the bridging members and the cogs of their associated primary ratchet wheels. This inadvertent drafting error has been remedied by revising paragraph (c) to recite “locking means, for *releasably* locking the bridging members in the *engaged* position”.
- (e) Minor punctuation changes have also been introduced into Claim 1, solely to enhance the readability of the longer passages in the claim.
- (f) In paragraph 4 of the Office Action, the Examiner rejected Claim 5 under 35 U.S.C. 112, second paragraph, on the basis that Claim 5 appeared to indicate an additional set of cogs on the bridging members. Claim 5 is presently amended to remedy this defect, by deleting original paragraph (b) of Claim 5 in its entirety. Claim 5 has been further clarified by deleting original paragraph (c), which is similarly extraneous in view of paragraph (b) of Claim 1.

- (g) Claim 5 has also been amended to delete the word "minimum" in reference to the width of the radial slot, thus avoiding any potential ambiguity as previously discussed with respect to similar wording in Claim 1 as originally filed.
- (h) Claim 5 has been further amended to refer to "each" rather than "the" auxiliary ratchet wheel, thus eliminating any ambiguity arising from the fact that a pair of auxiliary ratchet wheels have been recited.

3. Amendments to the Drawings

- (a) The drawings have been amended by introducing new Figures 7, 8, 9, 10, 11, and 12, to overcome the Examiner's rejection of Claims 6-8 under 35 U.S.C. 112, first paragraph, as discussed in paragraph E.1(c), above.

4. Other Issues Arising from the Office Action

- (a) In paragraph 2 of the Office Action, the Examiner rejected Claims 21-23 under 35 U.S.C. 112, first paragraph, on the basis that they are drawn to embodiments having only a single bracket with spring cone engaging means, thus rendering the device inoperative because proper rotation could not be performed with only a single bracket.

This issue was discussed in the telephone interview on March 1, 2005. At that time, the agent acknowledged that the use of two or more brackets would no doubt enhance the operation of the device by making rotation easier, but also suggested that the device could still be rotated using only one bracket. In support of this suggestion, the agent conveyed information received from the Applicants that the Applicants have in fact constructed and used embodiments with only one bracket (and only one spring cone engagement pin), and that such embodiments were satisfactorily operable, particularly with smaller springs. The agent also conveyed the Applicants' observation that torsion springs are commonly tensioned by rotating the spring cone with a single rod inserted into an opening in the spring cone, in accordance with prior art methods such as described in

paragraph [0004] of the present specification. It is readily evident from this fact that satisfactory (albeit perhaps less than ideal) rotation of a spring cone can be achieved using only one spring cone engagement pin (or analogous means).

During the telephone interview, the Examiner did not provide a decision on this point, but indicated that he would consider these arguments if presented in written form in a response to the Office Action. Applicants respectfully request that the Examiner's rejection of Claims 21-23 be withdrawn upon consideration of the observations and arguments presented above.

- (b) In paragraph 4 of the Office Action, the Examiner rejected Claims 1-4 and 6-25 under 35 U.S.C. 112, second paragraph, on the basis that no structure is disclosed to allow for the shaft being contained within the bridging member, thus rendering the claimed device inoperative and indefinite. This issue was discussed in the March 1, 2005 telephone interview, during which the agent explained that the invention does not require that the shaft be "contained within the bridging member". The shaft is slid through the radial slots in the primary ratchet wheels so as to be concentrically disposed therein, and the clogged bridging members are then moved to the engaged position so as to bridge the gaps in the clogged perimeters of their corresponding primary ratchet wheels (i.e., at the radial slots). To the extent that the shaft could be considered as being "contained" or "enclosed" by (rather than "within") the bridging members when the bridging members are in the engaged position, Applicants submit that sufficient structure is disclosed to enable this.

The undersigned agent's understanding from the telephone interview was that the agent's remarks (as set out and expanded upon above) provided a sufficient explanation, and that the rejection of Claims 1-4 and 6-25 would therefore be withdrawn.

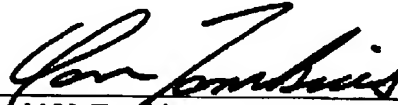
5. No New Matter

It is submitted that the present amendments introduce no new matter into the application. All subject matter contained in the application, as amended hereby, was expressly described in or is reasonably inferable from the originally-filed specification, claims, abstract, and/or drawings.

(F) CONCLUDING REMARKS

Applicants respectfully submit that the amendments presented herein have fully addressed all issues raised in the Office Action, and that the application will be in condition for allowance upon entry of the amendments. Accordingly, Applicants request timely issuance of a Notice of Allowance.

Respectfully submitted on behalf of the Applicants,
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